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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEMAN YU, JIANG LI, and SHIPENG LI

Appeal 2016-002224
Application 12/047,837
Technology Center 2400

Before CAROLYN D. THOMAS, DEBRA K. STEPHENS, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of claims 1–3 and 5–18. We have jurisdiction under 35 U.S.C. § 6(b). Claims 19, 21, and 22 have been withdrawn from consideration, as being directed to a non-elected invention. Claims 4 and 20 have been cancelled.

We REVERSE.

STATEMENT OF THE INVENTION

According to Appellants, the claims are directed to low complexity real-time video coding (Abstract). Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. One or more processor-accessible media comprising processor-executable instructions that, when executed, direct a device to perform actions comprising:

comparing an accuracy indicator to at least one threshold, the accuracy indicator corresponding to a reference macroblock selected for a target macroblock;

selecting a refinement case from a plurality of refinement cases associated with the reference macroblock based on a result of the comparing of the accuracy indicator to the at least one threshold, the plurality of refinement cases comprising different patterns of test points and each refinement case of the plurality of refinement cases comprising a pattern of test points that is different from the rest of the plurality of refinement cases; and

analyzing the selected refinement case with regard to the target macroblock.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Sezan	US 5,682,205	Oct. 28, 1997
Hsu	US 7,145,950 B2	Dec. 5, 2006

REJECTIONS

Claims 1–3, 5–7, and 9–18 stand rejected under 35 U.S.C. §102(e) as being anticipated by Hsu (Ans. 2–4).

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hsu and Sezan (Ans. 4–5).

ISSUES

35 U.S.C. § 102(e): Claims 1–3, 5–7, and 9–18

Appellants contend their invention as recited in claims 1–3, 5–7, and 9–18, is not anticipated by Hsu (App. Br. 6–11). The issues presented by the arguments are:

Issue 1: Has the Examiner erred in finding Hsu discloses:

comparing an accuracy indicator to at least one threshold, the accuracy indicator corresponding to a reference macroblock selected for a target macroblock, and

selecting a refinement case from a plurality of refinement cases associated with the reference macroblock based on a result of the comparing of the accuracy indicator to the at least one threshold, the plurality of refinement cases comprising different patterns of test points and each refinement case of the plurality of refinement cases comprising a pattern of test points that is different from the rest of the plurality of refinement cases,

as recited in claim 1?

Issue 2: Has the Examiner erred in finding Hsu discloses “comparing the accuracy indicator to at least two thresholds,” as recited in claim 3?

Issue 3: Has the Examiner erred in finding Hsu discloses “determining whether the accuracy indicator is less than the first threshold, is greater than the first threshold but less than the second threshold, or is greater than the second threshold,” as recited in claim 5?

ANALYSIS

Issue 1:

Appellants initially argue Hsu fails to disclose “comparing an accuracy indicator to at least one threshold, the accuracy indicator corresponding to a reference macroblock selected for a target macroblock” (App. Br. 8–10). Appellants assert Hu’s three-step motion search requires at least “ $4+1+9+2\times 9+2\times 9=50$ calculations of the SADs between two blocks in the current frame and the reference frame to obtain a final motion vector” (App. Br. 8 (citing Hsu, 4:41–6:18)). Additionally, Appellants contend Hsu uses some predictors solely to obtain better initial value of motion vectors (App. Br. 8). Thus, according to Appellants, these predictors are independent until “later being fused into two final candidate motion vectors” (*id.* at 8–9). Appellants therefore contend Hsu’s “two final candidate motion vectors are not used to guide the rest of a refinement stage to further improve the quality or reduce the complexity of the calculation,” (App. Br. 9 (citing Hsu, 4:19–6:18)).

We are not persuaded and instead, agree with the Examiner’s findings and reasoning (Ans. 2, 5–6).

Appellants further contend Figure 6 of Hsu, discloses blocks 200, 202, and 204 as selecting two candidate points from four initial points, P1, P2, P3, and P4 (App. Br. 10). However, according to Appellants, these four initial points are not a “refinement case”; rather, according to Appellants, points P1, P2, P3, and P4 each represent a single point (*id.*).

The Examiner does not find each of points P1, P2, P3, and P4 discloses a separate refinement case; rather, the Examiner finds the refinement cases are the points within the regions, each of the refinement

cases comprising different patterns of test points (Ans. 2, 6). More specifically, the Examiner finds Hsu's pattern of test points R1–R9 of search region R is different from the rest of the plurality of refinement cases, e.g., S1–S9 and T1–T9 (*id.* at 2–3). We agree with the Examiner that Hsu describes pixel data in various regions, such as pixel data R1–R9 in region R, pixel data S1–S9 in region S, and pixel data T1–T9 in region T (Ans. 2; Hsu Fig. 2) and P1–P4 of region R (Ans. 6–7; Fig. 4).

Although we agree with the aforementioned Examiner's findings, we agree with Appellants that the Examiner has not shown Hsu selects one of these refinement cases based on a result of comparing the accuracy indicator (App. Br. 9–10). Instead, the Examiner relies on selection of the potential motion vectors and not the selection of test points of various regions (Ans. 2). Accordingly, here we are persuaded the Examiner has failed to show Hsu discloses

selecting a refinement case from a plurality of refinement cases associated with the reference macroblock based on a result of the comparing of the accuracy indicator to the at least one threshold, the plurality of refinement cases comprising different patterns of test points and each refinement case of the plurality of refinement cases comprising a pattern of test points that is different from the rest of the plurality of refinement cases,

as recited in claim 1.

Issues 2 and 3:

Since we agree with at least one of the arguments advanced by Appellants, we need not reach the merits of Appellants' other arguments.

Accordingly, we cannot sustain the rejection of claims 1–3, 5–7, and 9–18 under 35 U.S.C. § 102(b) for anticipation by Hsu.

35 U.S.C. § 103(a): Claim 8

Claim 8 depends from claim 7 which depends from claim 1. For the reasons set forth above, we are not persuaded Hsu teaches, suggests, or otherwise renders obvious the invention as recited in claim 1. The Examiner has not shown Sezan cures the deficiencies of Hsu. Accordingly, we are persuaded the combination of Hsu and Sezan fails to teach, suggest, or otherwise render obvious the limitations as recited in claim 8. Therefore, we cannot sustain the rejection of claim 8 under 35 U.S.C. § 103(a) for obviousness over Hsu and Sezan.

DECISION¹

The Examiner's rejection of claims 1–3, 5–7, and 9–18 under 35 U.S.C. § 102(b) as being anticipated by Hsu is reversed.

¹ Should there be further prosecution with respect to claims 1–3, 5–7, and 9–18, the Examiner's attention is directed to *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007). Appellants' Specification states "Computer 1002 typically includes a variety of processor-accessible media. Such media may be any available media that is accessible by computer 1002 or another (e.g., electronic) device, and it includes both *volatile* and *non-volatile* media, *removable* and *non-removable* media, and *storage* and *transmission* media." (Spec. 29:6–9) (emphasis added). Thus, reading independent claim 1 in light of the Specification, the recited "processor-accessible media" encompasses propagated signals. According to USPTO guidelines, such claims must be amended to recite solely statutory subject matter. *See* David J. Kappos, *Subject Matter Eligibility of Computer Readable Media*, 1351 Off. Gaz. Pat. Office 212 (Feb. 23, 2010) and *Ex parte Mewherter*, 107 USPQ2d 1857, 1859 (PTAB 2013) ("[T]he broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals per se in

The Examiner's rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Hsu and Sezan is reversed.

REVERSED

view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent.” (citation omitted)).